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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,534	11/09/2001	Christopher J. Conway	9858-000031	4678

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EXAMINER

GARCIA, ERNESTO

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,534

Applicant(s)

CONWAY, CHRISTOPHER J.

Examiner

Ernesto Garcia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 25-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 25-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings were received on 11/10/03. These drawings are acceptable.

Election/Restrictions

The examiner has reconsidered the withdrawn claims and examined claims 42-46 as claim 42 is generic to the elected species.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16, 25-39, 41-43 and 45-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Paullus et al., 3,901,574 (see marked-up attachment provided in last office action).

Regarding claim 1, Paullus et al. disclose in Figure 1 and 2 a connector comprising a housing **16** and a locking ring **52**. The housing **16** defines a first thread portion **A2** extending around a portion of the housing **16** and a second thread portion **38** extending around a portion of the housing **16**. The first thread portion **A2** comprises a first pitch coarser than a second pitch of the second thread portion **38**. The locking ring **52** defines a thread engagement member **72,74**.

The thread engagement member **72,74** first engages the first thread portion **A2** and then successively engages the second thread portion **38** to secure the locking ring to the housing with a varying amount of axial travel per rotation of the locking ring that corresponds with the first pitch of the first threaded portion and the second pitch of the second threaded portion.

Regarding claim 2, the thread engagement member **72,74** comprises two radial protrusions **72,74**. The radial protrusions **72,74** successively engage the first thread portion **A2** and the second thread portion **38**.

Regarding claims 3, 19, 23 and 31, the radial protrusions **72,74** are diametrically opposed.

Regarding claim 4, at least one thread protrusion **40** is disposed within the second thread portion **38**. At least one of the radial protrusions **72,74** engages the thread protrusion **40**.

Regarding claim 6, the connector further comprises two thread protrusions **40,42** disposed within the second thread portion **38**. The radial protrusions **72,74** engage the two thread protrusions **40,42** (Fig. 6).

Regarding claims 5, 7 and 9, the connector further comprises a lateral stop **44** disposed at an end of the second thread portion **38**.

Regarding claim 8, at least one thread protrusion **40** is disposed within the second thread portion **38** such that the thread engagement member **72,74** engages the thread protrusion **40**.

Regarding claims 10, 20 and 38, the locking ring **52** further comprises an exterior surface **82** defining axial ridges **68**.

Regarding claims 11 and 14, Paullus et al. disclose a housing **16** or a socket housing **16** comprising a first thread portion **A2** defining a first pitch and a second thread portion **38** defining a second pitch. The first thread portion **A2** extends around a portion of the housing **16**. The second thread portion **38** extends around a portion of

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the housing **16**. A component **52** first engages the first thread portion **A2** and then successively engages the second thread portion **38** to secure the component to the housing with a varying amount of axial travel per rotation of the component that corresponds with the first pitch and the second pitch.

Regarding claims 12 and 15, the housing **16** further comprises at least one thread protrusion **40** disposed within the second thread portion **38** such that the component **52** engages the thread protrusion **40**.

Regarding claims 13 and 16, the housing **16** further comprises a lateral stop **44** disposed at an end of the second thread portion **38**.

Regarding claim 25, Paullus et al. disclose in Figures 1 and 2 a fluid and electric connector comprising a housing **16**, at least one thread protrusion **40**, and a locking ring **52**. The housing **16** defines a first threaded portion **A2** defining a first pitch and a second threaded portion **38** defining a second pitch. The thread protrusion **40** is disposed within the first threaded portion **A2**. The locking ring **52** defines a thread engagement member **72,74**. The thread engagement member **72,74** first engages the first threaded portion and then successively engages the second threaded portion to secure the locking ring to the housing with a varying amount of axial travel per rotation of the locking ring that corresponds with the first pitch and the second pitch. The thread

engagement member engages the thread protrusion to provide an audible and tactile indication of a fully mated condition.

Regarding claim 26, the connector further comprises two thread protrusions **40,42**. The thread engagement member **72,74** engages the thread protrusions **40,42**.

Regarding claim 27, the thread protrusion **40** defines a first sloped surface and a second sloped surface (Fig. 6) such that the thread engagement member **72,74** passes over the first sloped surface and the second sloped surface.

Regarding claim 28, a lateral stop **44** is disposed at an end of the threaded portion **A2, 38**.

Regarding claim 29, a connector comprises a housing **16** and a locking ring **52**. The housing **16** defines multiple threaded portions **A2,38** extending around a portion of and along a length of housing **16**. Each successive threaded portion **A2, 38**, along the length, comprises a pitch different than a pitch of a previous threaded portion **A2, 38**. The locking ring **52** defines a thread engagement member **72,74**. The thread engagement member **72,74** engages the threaded portions **A2,38**. The thread engagement member **72,74** successively engages the threaded portions to secure the locking ring to the housing with a varying amount of axial travel per rotation of the locking ring that corresponds with the pitches of the threaded portions.

Regarding claim 30, the thread engagement member **72,74** comprises two radial protrusions **72,74** that engage the threaded portions **A2,38**.

Regarding claims 32 and 36, the connector further comprises at least one thread protrusion **40** disposed within a threaded portion **A2, 38** such that at least one of the radial protrusions **72,74** engages the thread protrusion **40**.

Regarding claims 33, 35 and 37, a lateral stop **44** is disposed at an end of a threaded portion **A2, 38**.

Regarding claim 34, the connector further comprises two thread protrusions **40,42** within a threaded portion **A2, 38** such that the radial protrusions **72,74** engage the two thread protrusions **40,42**.

Regarding claim 39, the thread engagement member **72,74** is internal to the locking ring **52** and the threaded portions **A2,38** are external to the housing **16**.

Regarding claim 41, Paullus et al. disclose in Figs. 1 and 2 a connector comprising a housing **16** and a locking ring **52**. The housing **16** defines a first thread portion **A2** and a second thread portion **38**. The first thread portion **A2** comprises a first pitch coarser than a second pitch of the second thread portion **38**. Two thread

protrusions **40,42** are disposed within the second thread portion **38**. The locking ring **52** defines a thread engagement member **72,74** comprising two diametrically opposed radial protrusions **72,74**. The radial protrusions **72,74** first engage the first thread portion **A2** and then successively engage the second thread portion **38**. The radial protrusions **72,74** engage the thread protrusions **40,42**.

Regarding claim 42, Paullus et al. disclose a connector comprising a first component defining a thread engagement member, and a second component defining multiple threaded portions, wherein each successive threaded portion comprises a pitch that is different than a pitch of a previous threaded portion. The thread engagement member engages the multiple threaded portions to secure the first component to the second component with a varying amount of axial rotation per rotation of the first component that corresponds with the pitches of the multiple threaded portions.

Regarding claim 43, the thread engagement member is internal to the first component and the multiple threaded portions are external to the second component.

Regarding claim 45, the connector further comprises at least one thread protrusion disposed within a threaded portion such that the thread engagement member engages the thread protrusion to provide an audible and tactile indication of a fully mated condition.

Regarding claim 46, the connector a lateral stop disposed at an end of a threaded portion to limit travel of the first component.

Regarding claim 47, Paullus et al. disclose a method of connecting two components, the method comprising the steps of: (a) engaging a first component comprising a thread engagement member with a second component comprising multiple threaded portions extending along a length of the second component, wherein each successive threaded portion along the length comprises a pitch that is different than a pitch of a previous threaded portion; and (b) rotating the first component such that the thread engagement member successively engages the multiple threaded portions, wherein the thread engagement member engages the multiple threaded portions to secure the first component to the second component with a varying amount of axial travel per rotation of the first component that corresponds with the pitches of the multiple threaded portions.

Regarding claim 48, the method further comprising: rotating the first component until the thread engagement member engages a thread protrusion within a threaded portion, wherein an audible and tactile indication of a fully mated condition occurs.

Regarding claim 50, the method further comprises: rotating the first component until the thread engagement member engages a lateral stop at an end of a threaded portion, wherein travel of the first component is limited by the lateral stop.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paullus et al., 3,901,574, in view of Mattingly et al., 5,383,272.

Regarding claim 40, Paullus et al., as discussed above, fails to disclose the thread engagement member being external to the locking ring and the multiple threaded portions being internal to the housing. Mattingly et al. teach in Figure 1 a connector comprising a thread engagement member **22** being external to a first component **12** and multiple threaded portions **34** being internal to the second component **14** as an alternative configuration of placing threaded portion internal or external to the first member. Therefore, as taught by Mattingly et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the thread engagement member external to the locking ring component and place the multiple threaded portion internal to the second component as an alternative and reversal configuration.

Regarding claim 44, Paullus et al., as discussed above, fails to disclose the thread engagement member being external to the first component and the multiple threaded portions being internal to the second component. Mattingly et al. teach in Figure 1 a connector comprising a thread engagement member **22** being external to a first component **12** and multiple threaded portions **34** being internal to the second component **14** as an alternative configuration of placing threaded portion internal or external to the first member. Therefore, as taught by Mattingly et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the thread engagement member external to the first component and place the multiple threaded portion internal to the second component as an alternative and reversal configuration.

Response to Arguments

Applicant's arguments filed 11/10/03 have been fully considered but they are not persuasive.

Applicant has argued by definition that the ramps 34 are clearly not helical or spiral ridges and thus cannot be threads. Applicant is correct that the ramps are not threads; however, the claims do not call for threads but rather threaded portions, i.e., a first threaded portion and a second threaded portion. The ramps 34 are part of the


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entire thread and thus a first threaded portion. The remainder of the thread would be the second threaded portion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703-308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.


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E.G.

January 23, 2004